

Management of a Chronic Abscess Wound Caused by an Ankus in a Captive Asian Elephant

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Introduction

Elephants are the largest living terrestrial vertebrates and humans have maintained Asian elephants in captivity for over 4000 years. The large size of elephants causes serious problems and places significant limitations in their handling and management including the treatment of wounds. Typically wounds are divided into acute and chronic. Acute wounds are traumatic or surgical in origin and heal over time. Chronic wounds are those that fail to heal through an orderly and timely process and are not capable of closure or regaining the anatomy and function of healthy skin. Chronic wounds are often associated with abscesses, which are collections of pus. They commonly occur secondary to wound infection and may occur in all parts of the body in elephants. They may become chronic, if not attended to in time.

The skin of an Asian elephant is very thick, measuring about 2.5–5.0 cm and lacks sebaceous glands. Wound healing is prolonged in elephants,

due to the thick dermis and forming of pyogenic membranes (Miller *et al.* 2015). Surgical treatment of elephants is usually avoided, as post-operative care is difficult. Fowler & Mikota (2006) state that suturing is not generally practiced for elephants, as wound dehiscence (rupture) is common. This paper communicates management of a chronic wound abscess caused by an ankus (Figs. 1 & 2).

Case history

A female Asian elephant aged around 55 years, weighing around 2800 kg in good physical condition and with normal feeding activity presented with a penetrating wound on the upper left ear base (Fig. 3). Examination revealed an abscess, which was drained. The pus (Fig. 4) was collected on cotton swabs and was disposed to prevent the accumulation of bacteria in the



Figure 1. Ankus / ankush, a restraining tool.



Figure 2. Use of ankus on elephant.



Figure 3. Wound entry point at base of ear.



Figure 4. Pus removed during cleaning.



Figure 5. Showing depth of wound pocket.

facility. The abscess pocket was found to be 8 cm deep and 5 cm in diameter (Fig. 5). The wound was flushed with 2% Potassium Permanganate solution followed by 5% Povidone iodine solution and thoroughly cleaned with gauze.

The wound pocket (Fig. 6) was packed with a mixture of copper sulphate and Magnesium sulphate powders mixed with Iodine solution twice daily for three months and after that once a day for two months. Additionally, the elephant was given Enrofloxacin (10 mg/kg IM), Meloxicam (0.2 mg/kg IM), Chlorpheniramine Maleate (4 mg/kg IM) and Multivitamin (70 ml IM) for five



Figure 6. Showing area of wound pocket.

days. The swelling reduced dramatically after two months of regular dressing and the wound showed signs of healing with reduction in wound depth as assessed through introduction of artery forceps.

The successful treatment of the chronic abscess wound took five months and proved a challenge because of the anatomical site of the wound.

The ankus is a restraining device, which depends on causing pain and is liable to cause injury. Effective monitoring and preventing misuse of such devices is recommended with regular awareness education of mahouts.

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References

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